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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,374	09/26/2001	Jeffry Harlow Loucks	PALM-3612	6414

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EXAMINER
TO, JENNIFER N

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/965,374	LOUCKS, JEFFRY HARLOW
	Examiner	Art Unit	
	Jennifer N. To	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 April 2005_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-29_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-29_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-29 are pended for examination.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4.   Claims 1-14 are directed to method steps in which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alia, (registering, ranking, allocating) can be practiced mentally in conjunction with pen and paper that is not tied to a technological art, environment, or machine which would result in a practical application producing a concrete, useful, tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Therefore, the claimed invention is directed to non-statutory subject matter. The claims should be amended to indicate a computer implements the subject matter.   (i.e. a computer implemented method).

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter in which the applicant regards as his invention.

6.   Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

    a.   The following terms lack proper antecedent basis:

        i.   the computer operating system: claims 1, 10, and 16;

        ii.   the computer system: claims 3, and 12;

        iii.   the service: claims 5-7, 11, 17, and 20-22;

    b.   The claim language in the following claims is not clearly understood:

        i.   as per claim 23, lines 1-2, it is uncertain what is the relationship between "a computer system" and "a method for scheduling tasks" (i.e. a computer system having a method for scheduling tasks).

        ii.   as per claim 26, lines 1-2, it is uncertain what is the relationship between "in a computer system having a number of foreground applications executing" and "method for scheduling tasks" (i.e. a method for scheduling tasks in a computer system having a number of foreground applications executing).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 3-8, 10, 12-14, 16, 18-22, and 26-29 rejected under 35 U.S.C. 103(a)

as being unpatentable over Reiffin (U.S. Patent No. 6330583) in view of Shi et al.

(hereafter Shi) (U.S. Patent No.6757897).

4.   Reiffin was cited in the last office action 01/25/2005.

5.   As per claim 1, Reiffin teaches the invention substantially as claimed including

method for scheduling tasks comprising:

a background task registering at least one registered service (col. 4, lines 26-35),

said background task invoked by a kernel of the computer operating system in a

dedicated pre-assigned time slice, the computer operating system comprising said

background task and a foreground task (abstract, lines 4-6), the background task being

scheduled independent from the operation of the foreground task (abstract, lines 6-11;

fig. 3; col. 4, lines 24-32), the background task for providing an execution presence and

a data presence to each of the at least one registered service (col. 4, lines 41-66).

Reiffin did not specifically teach:

the background task ranking the at least one registered service according to the

requirements of each of the at least one registered service; and

the background task allocating the execution presence and the data presence
accordingly to each of the at least one registered service such that each of the at least
one registered service is given an opportunity to be scheduled in the dedicated pre-
assigned time slice.

6.   However, Shi teaches:

the background task ranking the at least one registered service according to the
requirements of each of the at least one registered service (col. 6, lines 24-33; col. 11,
lines 4-27); and

the background task allocating the execution presence and the data presence
accordingly to each of the at least one registered service such that each of the at least
one registered service is given an opportunity to be scheduled in the dedicated pre-
assigned time slice (col. 5, lines 47-67).

7.   It would have been obvious to one of an ordinary skill in the art at the time the
invention was made, to have combined the teaching of Reiffin and Shi because
Waldron's ranking the tasks and scheduling services in a pre-assigned time slice would
improve the efficiency in Reiffin's system by providing a balanced system that can
greatly avoid task starvation while also meeting the response time requirements of the
primary task and other priority task(s) (Shi, abstract, lines 27-31).

8.   As per claim 3, Reiffin teaches wherein the computer system is a portable
electronic device (col. 3, lines 57-59).

9.   As per claim 4, Reiffin and Shi did not specifically teach that the data presence is
an A5-based global variable context. However Shi disclosed the resources allocation in
which data presence is one of the resources (col. 10, lines 63-64). It would have been
obvious to one of an ordinary skill in the art at the time the invention was made to have
included A5-based as the data presence type in Reiffin and Shi's system because A5-
based is known as one of the common used data in the art.

10.   As per claim 5, Reiffin teaches wherein the service is a system related activity
(col. 4, lines 33-40).

11.   As per claim 6, Reiffin teaches wherein the service is an interrupt-related activity
(col. 4, lines 5-13).

12.   As per claim 7, Reiffin teaches wherein the service is a background-related
activity (col. 5, lines 3-8).

13.   As per claim 8, Reiffin further teaches the step of periodically repeating the steps
a) through c) (col. 6, lines 19-23).

14.   As per claims 10, 12-14, and 18-22, they are rejected for the same reason as

claims 1, and 3-8 above.

15.   As per claim 16, it is rejected for the same reason as claim 1 above. In addition,

Reiffin teaches a processor coupled to a bus (col. 3, lines 64-67); and a memory unit

coupled to the bus having stored therein an operating system executed by the

processor and a background task executed by the processor (col. 4, lines 14-19).

16.   As per claim 26, it is rejected with the same reason as claim 1. In addition,

Reiffin teaches a kernel of an operating system scheduling a plurality of tasks for

execution on the computer system within respective time slices (col. 4, lines 33-36).

17.   As per claim 27, Reiffin teaches that the plurality of applications comprise a

system service, an interrupt service and a background service (col. 4, lines 3-40).

18.   As per claim 28, Reiffin teaches that the computer system is a handheld

computer system (col. 3, lines 57-59).

19.   As per claim 29, Waldron teaches that the service manger dynamically

registering the plurality of applications based on registration information associated

therewith (col. 21, lines 61-65).

20.   Claims 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Reiffin (U.S. Patent No. 6330583) in view of Burns (U.S. Patent No. 6098090).

21.   Reiffin and Burns were cited in the last office action 01/25/2005.

22.   As per claim 23, Reiffin teaches the invention substantially as claimed including

in computer system, a method for scheduling tasks (col. 4, lines 33-36), the method

comprising:

        cycling through a set of pre-assigned time slices to schedule a set of tasks

comprising a background task and a foreground task, each of the tasks assigned to one

of the time slices wherein scheduling of the background task is independent from the

scheduling of the foreground task (col. 2, lines 22-33 and col. 4, lines 33-40).

        Reiffin did not specifically teach that the set of registered services may be

dynamically updated, and service manager allocating a data presence to each of set

registered services.

23.   However Burn teaches that the set of registered services may be dynamically

updated (col. 2, lines 5-19), and service manager allocating a data presence to each of

set registered services (col. 10, line 67; and col. 11, lines 1-13).

24.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Reiffin, and Burns because

Burns's dynamically updating registered services and allocating data presence of

registered services would improve the integrity of Reiffin's system by eliminating task

switching among background process and minimizing the amount of system resources

required to run background tasks (Burns, col. 1, lines 60-64).

25.   As per claim 24, Reiffin teaches wherein said computer system is a portable

electronic device (col. 3, lines 57-59).

26.   Claim 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiffin

(U.S. Patent No. 6330583) in view of Burns (U.S. Patent No. 6098090), as applied to

claim 23, and in further view of Shi (U.S. Patent No. 6757897).

27.   As per claim 25, Reiffin and Burns teach the invention substantially as claimed in

claim 23. Reiffin and Burns did not specifically teach the data presence is an A5-based

global variable context.

28.   However, Shi teaches the resources allocation in which data presence is one of

the resources (col. 10, lines 63-64).

29.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made to have combined the teaching of Reiffin, Burns, and Shi because

Shi teaching of the resources allocation in which data presence is one of the resources

would improve the integrity of Reiffin and Burns's system by using A5-based global

variable context as data presence to each of the at least one registered service.

30.   Claims 2, 9, 11, 15, and 17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Reiffin (U.S. Patent No. 6330583) in view of Shi (U.S. Patent No.

6757897), as applied to claims 1, 10, and 16, and in further view of Burns (U.S. Patent

No. 6098090).

31.   Reiffin and Burns were cited in the last office action 01/25/2005.

32.   As per claim 2, Reiffin and Shi teach the invention substantially as claimed in

claims 1, 10, and 16. Reiffin and Shi did not specifically teach that the background task

searching for one or more of the at least one registered service associated therewith.

33.   However Burns teaches the step of the background task searching for one or

more the at least one registered service associated therewith (col. 4, lines 50-62).

34.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Reiffin, Shi, and Burns because

Burns's searching step would improve the integrity of Reiffin and Shi's system by having

only the associated service (Burns col. 1, lines 43-45).

35.   As per claim 9, Burns teaches the steps of periodically repeating said step of

searching for at least one service associated therewith (col. 3, lines 42-56 and col. 4,

lines 50-62).

36.   As per claims 11,15, and 17, they are rejected with the same reason as claims 2,

and 9 above.

Response to Arguments

37.   Applicant's arguments with respect to claims 1-29 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

38.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jennifer N. To whose telephone number is (571) 272-

7212. The examiner can normally be reached on M-T 7AM-4: 30 PM, F 7AM-3: 30 PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer N To
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